Amendments to Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1. (CURRENTLY AMENDED) A liquid crystal apparatus, comprising a plurality of stackable optical cells, each of the plurality comprising a combination of a cholesteric layer switchable between a cholesterically ordered wavelength-selectively reflective state and a transmissive state and a homeotropic orientation layer which is in direct contact with the cholesteric layer.

2. (CURRENTLY AMENDED) A ~~combination~~ liquid crystal apparatus as claimed in claim 1 wherein the cholesteric layer of each of the plurality of stackable optical cells is sandwiched between a homeotropic alignment layer and a planar alignment layer.

3. (CANCELED)

4. (CANCELED)

5. (CURRENTLY AMENDED) A liquid crystal display device comprising a plurality of stackable optical cells, each cell of the plurality of stackable optical cells including a polymerized cholesteric layer ordered in a cholesterically ordered state capable of wavelength-selectively reflecting polarized light obtainable by polymerizing a polymerizable cholesteric layer in a cholesterically ordered state capable of wavelength-selectively reflecting polarized light, the polymerizable layer being~~, during polymerization,~~ in direct contact with a homeotropic alignment layer.

6. (NEW) A bi-stable liquid crystal apparatus, comprising:

a plurality of stackable optical cells, each stackable optical cell, including

a homeotropic alignment layer;

a liquid crystal layer in direct contact with the homeotropic alignment layer, the liquid crystal layer including polymerizable cholesteric liquid crystal that is at least substantially free of dichroic dye and that is switchable between

a reflective state that reflects a predetermined wavelength of electromagnetic radiation based upon at least one of pitch and birefringence and

a transmissive state; and

a planar alignment layer opposite the homeotropic alignment layer such that the liquid crystal layer is positioned between the homeotropic alignment layer and the planar alignment layer; and

a plurality of electrodes configured to switch the liquid crystal layer between the reflective state and the transmissive state.

7. (NEW) The bi-stable liquid crystal apparatus of claim 6, wherein the reflective state that reflects a predetermined wavelength of electromagnetic radiation based upon at least one of pitch and birefringence of a first liquid crystal layer of the plurality of stackable optical cells is different from the reflective state that reflects a predetermined wavelength of electromagnetic radiation based upon at least one of pitch and birefringence of a second liquid crystal layer of the plurality of stackable optical cells.

8. (NEW) The bi-stable liquid crystal apparatus of claim 7, wherein each of the plurality of stackable optical cells is pixellated.

9. (NEW) The bi-stable liquid crystal apparatus of claim 8, wherein light reflected from the liquid crystal layer of at least one of the plurality of stackable optical cells has a 1/e width of about 22°.